

<b>PAYLOAD HAZARD REPORT</b>		a. NO: GHR-AMS02--015
b. PAYLOAD: Alpha Magnetic Spectrometer-02 (AMS-02) GSE		c. PHASE: II
d. SUBSYSTEM: Electrical, Mechanical	e. HAZARD GROUP: Touch Temperatures	f. DATE: May 2008
g. HAZARD TITLE: Touch Temperatures-Hot		i. HAZARD CATEGORY <input checked="" type="checkbox"/> CATASTROPHIC <input type="checkbox"/> CRITICAL
h. APPLICABLE SAFETY REQUIREMENTS:  KHB 1700.7, Section: 4.2.1.5 Temperature		
j. DESCRIPTION OF HAZARD: Excessively high temperatures present touch temperature hazards to Ground Support Operators. (Above 45° C or 113° F)		
k. HAZARD CAUSES: 1. Pumps/motors overheat. 2. Operation of flight Cryomagnet dump diodes. 3. TRD K-bottle heaters malfunction. 4. Payload electronics operations.		
l. HAZARD CONTROLS:  (See continuation sheet)		
m. SAFETY VERIFICATION METHODS:  (See continuation sheet)		
n. STATUS OF VERIFICATION:  (See continuation sheet)		
o. APPROVAL	PAYLOAD ORGANIZATION	SSP/ISS
PHASE I		
PHASE II	<i>[Signature]</i> KENT MARTIN 10/13/08	<i>[Signature]</i> 10/13/08
PHASE III		

<b>PAYLOAD HAZARD REPORT CONTINUATION SHEET</b>		a. NO: GHR-AMS02--015
b. PAYLOAD: Alpha Magnetic Spectrometer-02 (AMS-02) GSE		Phase II
k. HAZARD CAUSES: 1. Pumps/motors overheat.		
1. HAZARD CONTROLS: 1.1 Pumps/motors are cooled either by water coolant system or air cooled. 1.2 Large vacuum pumps will be covered with acoustic dampening housing which will preclude inadvertent personnel contact. 1.3 Hot temperature surfaces will be labeled.		
m. SAFETY VERIFICATION METHODS: 1.1.1 Review of various pump systems. 1.2.1 Review of various pump systems. 1.3.1 Review of AMS procedures.		
n. STATUS OF VERIFICATION: 1.1.1 Open 1.2.1 Open 1.3.1 Open		

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k. HAZARD CAUSES: 2. Operation of dump diodes.			
l. HAZARD CONTROLS:  2.1 Diodes are located in an area out of reach of personnel contact on the USS-02. 2.2 Diodes are shielded by an enclosure. 2.3 Access will be restricted to the AMS-02 when it is charged. Discharge will occur while restrictions are still in place. 2.4 Procedures will include warnings about the potential high temperature location of the dump diodes after a discharge.			
m. SAFETY VERIFICATION METHODS: 2.1.1 Review of AMS-02 drawings.  2.2.1 Review of AMS-02 drawings.  2.3.1 Review of AMS-02 procedures.  2.4.1 Review of AMS-02 procedures.			
n. STATUS OF VERIFICATION: 2.1.1 Open 2.2.1 Open 2.3.1 Open 2.4.1. Open			

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k. HAZARD CAUSES: 3. TRD K-bottle heaters malfunction.			
1. HAZARD CONTROLS: 3.1 Thermal controller will not be set over 40° C (104° F). 3.2 The thermal controller has a temperature sensor that keeps the controller from going over set limit of 40° C. 3.3 The K-bottle has a frame to prevent personnel from touching it.			
m. SAFETY VERIFICATION METHODS: 3.1.1 Review of procedures. 3.2.1 Review of thermostat specifications. 3.2.2 Operational testing conducted at CERN. 3.3.1 Review of hardware layout.			
n. STATUS OF VERIFICATION: 3.1.1 Open 3.2.1 Open 3.2.2 Open 3.3.1 Open			

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k. HAZARD CAUSES: 4. Payload electronics operations.		
l. HAZARD CONTROLS: 4.1 Access will be restricted to the AMS-02 when it is powered. Restrictions will remain in force until it is deemed safe for personnel to approach the payload.		
m. SAFETY VERIFICATION METHODS: 4.1.1 Review of AMS-02 procedures.		
n. STATUS OF VERIFICATION: 4.1.1 Open		